Library Material Reservation Application (LiMaRA)

Overall Project Summary

Develop a J2EE web application that provides library material reservations for a city library. The application will consist of jspx pages, servlets and/or filters, css files, event listeners, java bean components, and java data components and will provide navigation between them through the use of buttons and links.

When the application first opens, the limousine client will be presented with a login screen. They will provide their login information. The application will authorize their access to the site after confirming their credentials against those stored in a database. After logging in, the library account owner is presented with a library material reservations screen.

The libarary account owner can perform the following operations:

1. Create a new library account
2. View existing library material reservations
3. Cancel a library material reservation
4. Reserve library materials
5. Exit the application (logout)

Create a New Library Account

From the login screen, a non library account owner has the opportunity to create a new library account by clicking on a **New Library Account** link. The non library account owner provides a first name, last name, username, and password along with confirm password and then clicks the **Create Library Account** button. The new library account owner is then taken to the existing library material reservations page where the (initially empty) reservations list is displayed for the new account.

View Existing Library Material Reservations

Once the library account owner has logged in, they are presented with a screen showing a list of the account owner's current library material reservations (material_id, type, reservation expiration date). Along with each reservation is a **Cancel Reservation** button. To cancel a library material reservation, the account owner would simply click the **Cancel Reservation** button. The account owner must confirm the library material reservation cancellation. After confirming the cancellation of the library material reservation, the account owner is presented with an updated list showing that the library material reservation has been cancelled.

Reserve Library Materials

The library account owner will use the reserve library materials page to reserve library materials. The page allows a title (or partial title) and the desired type of library material to be specified. The type of the library material should be a drop down list. For example: **All**, **Book**, **Audio**, **Video** (you can add other types you feel are appropriate). **All** should be the default (first in the list). Finally, a **Check What's**

Available button can be clicked to search for any available library materials matching the specified criteria. After the **Check What's Available** button is clicked, the search results are listed on the <u>same page</u> (below the search criteria). Beside each listed library material is a **Reserve This** button. The library account owner can simply click the **Reserve This** button to reserve the library material.

Logging Out

When the library account owner logs out, the application terminates the library account owner's session and returns to the login screen.

The Library Materials

The several library materials will be fixed and prepopulated in the database in Stage 3 of the application. You may expand on this list by adding your own library materials.

Using Subversion

You and your partner must use the subversion software repository for your shared development work. A username and password will be e-mailed to you.

Project Stages

The project is divided into three stages.

1. **UI Page Design and Navigation:** For this stage you must determine the XHTML structure of the pages and apply any desirable CSS styles. The pages will contain mock data to show off the page's structure and presentation features. Simple static page navigation is implemented. While you are working with a partner (technically), each will have very separate responsibilities; the work submitted for stage 1 will be your own (although you and your partner will make a single submission with both works combined). Details on the division of labour will be provided later.

2. **Implementation of HTML Forms, Error Pages, Servlets/Filters, and the MVC Framework:** For this stage, you and your partner will design and implement the MVC framework of the application. The MVC framework provides a mechanism for user feedback (provided via HTML forms) to be processed by your java code and then have the results passed on to a JavaServer Page for display. For this stage, you will stub the data portion of the application to provide *faked* data.

3. **Session State, JSTL, and JDBC:** For this stage, you will finalize the implementation adding session state to hold the user information, JSTL to provide dynamic responses depending on the state of the application, and JDBC to access the data storage for the application. Again, the work submitted will be your own although you and your partner will combine the work for submission. The final design will be presented to the class.

Grading

Marks for this project are broken down as follows:

Description	Weight

Stage 1	3.0%
Stage 2	5.0%
Stage 3	5.0%
[1]Presentations	1.0%
[2]Peer Evaluation	±2.5%
[3]Repository Use	1.0%

[1]Each person must present in order to get a grade for the presentation portion.

[2]The Peer Evaluation component comes from an evaluation from your classmates. The peer evaluation component can <u>raise or lower</u> your grade and is determined by taking the difference between your peer evaluation score (out of 2.5%) and the average peer evaluation score (out of 2.5%). This ensures that your evaluation by your peers is relative to the evaluation of your peers.

[3]Your use of the subversion software repository for your project development will be monitored and graded. Follow the use guidelines presented on My.Seneca and on the reference web page.

[Stage 1 Details](#)
[Stage 2 Details](#)
[Stage 3 Details](#)